



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,386	04/19/2007	Jonathan Sebastian Howes	10121-10 MBS-01	8999
58898	7590	04/16/2010	EXAMINER	
LEMPIA BRAIDWOOD LLC			VASUDEVA, AJAY	
One North LaSalle Street				
CHICAGO, IL 60602				
			ART UNIT	PAPER NUMBER
			3617	
			NOTIFICATION DATE	DELIVERY MODE
			04/16/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@lempialaw.com
jackie@lempialaw.com
mail@lempialaw.com

Office Action Summary	Application No. 10/584,386	Applicant(s) HOWES ET AL.	
	Examiner Ajay Vasudeva	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-14 and 16 is/are rejected.
- 7) ☒ Claim(s) 10, 15 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- Each limb having an operational configuration in which the inner and outer surfaces are sufficiently continuous to maintain flow over the inner and outer surfaces between forward and rearward ends of the limb without flow through the limb (as set forth in claim 1)

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9 (line 1), use of “wherein the member comprises a pair of substantially straight limbs” (emphasis added) renders the claim indefinite. It is not sufficiently clear if such “pair of limbs” is same or different from the “two limbs” recited in the preceding claim 1. However, changing “wherein the member comprises” to -- wherein the two limbs comprise -- will overcome this rejection.

In claim 9 (line 3), use of “the loop” lacks proper antecedent basis in the claim

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 8, 11-14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 05-050979 A ('979), cited in previous Office action.

JP '979 shows a vessel comprising a hull [1] and a keel member depending from the hull. The keel member comprising two limbs [2A] depending from lateral sides of the hull, the two limbs having foil surfaces (fig. 2) and defining an enclosed flow path extending in a bow-to-stern direction and allowing water to flow over inner and outer surfaces of the two limbs (see fig. 4). The two limbs are angled outwardly toward the bow of the vessel with a positive angle of attack relative to the incident water (see fig. 2), allowing the foil surfaces to generate a hydrodynamic force directed away from the enclosed flow path. Each limb has an operational configuration in which the inner and outer surfaces are sufficiently continuous to maintain flow over the inner and outer surfaces between forward and rearward ends of the limb without flow through the limb.

Re claim 2, the foil sections of the limbs are symmetrical (see fig. 2a).

Re claim 3, the foil sections of the limbs are asymmetrical (see fig. 2b). The angle of attack of the asymmetrical foil being considerably large, the lift generated by the curved inner surface of the foil would not be sufficient to overcome the force that is directed away from the enclosed flow path – at least when the velocity of the incident water is low.

Art Unit: 3617

Re claim 8, the two limbs each comprise a substantially straight portion.

Re claim 11, the two limbs are symmetrically disposed on either side of a central, longitudinal axis of the hull.

Re claim 12, the two limbs are directed inwards toward the hull where they depend from the hull (see fig. 4).

Re claim 13, the two limbs are substantially perpendicular to the hull at the point where they meet the hull (see figures 4, 5 and 6).

Re claim 14, the horizontal structure [3A] at the bottom of the limbs is considered to be a ballast portion.

Re claim 16, at least one limb has a part having a sharp leading-edge.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-050979 A ('979) in view of JP 61-200080 A ('080).

JP '979 shows a vessel comprising two limbs depending from a hull. However, it does not show a moveable flap attached to the limbs.

JP '080 shows a vessel having two limbs [2, 3] depending from a hull and an independently moveable flap [7] attached to each limb.

Art Unit: 3617

It would have been obvious for one skilled in the art at the time of the invention to provide an independently moveable flap with each limb of JP '979, as taught by JP '080. Having such an arrangement would have allowed one to maintain hydrodynamic stability of the vessel during turns, thereby improving its operational safety. It is noted that independently moving the flap would have allowed the angle of the foil surface to be variable (claim 4), thereby providing it with variable camber (claim 5).

Allowable Subject Matter

8. Claims 10, 15 and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-9, 11-14 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajay Vasudeva whose telephone number is (571) 272-6689. The examiner can normally be reached on Monday-Friday 12:00 -- 5:30 pm.

Art Unit: 3617

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ajay Vasudeva/
Primary Examiner
Art Unit 3617